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EXAMINER	
PHILPOTT, JUSTIN M	

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Applicati n No.	Applicant(s)	
	09/738,010	GOSSETT ET AL.	
	Examin r	Art Unit	
	Justin M Philpott	2665	

-- Th MAILING DATE of this communication app ars on the cover sh t with th correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 November 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *31-39 and 50-59* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *31-39 and 50-59* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 18, 2004 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 31-39 and 50-59 have been considered but are moot in view of the new ground(s) of rejection. Specifically, applicant has amended the claims to include additional limitations which overcome the previous prior art rejections. As amended, however, the claims are presently rejected in the following action in view of the newly cited art of Gridley.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 31 and 55 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,522,656 to Gridley.

Regarding claims 31 and 55, Gridley teaches a network management system comprising: a communication port (e.g., ports P1-P8, see FIG. 1) for communicating information; a switching circuit (e.g., system card 200, see FIG. 3) for providing an output communication path (e.g., backplane 20) to the communication port (e.g., ports P1-P8 on LAN card 100) and performing unscheduled cut through routing (e.g., see col. 5, line 17 – col. 6, line 14 regarding cut-through switching) of a communication path probe (e.g., header information sent by packet processor 130, see col. 5, lines 17-26), wherein the probe (e.g., header information) is discarded if the unscheduled cut through routing is not performed directly (e.g., see col. 5, lines 56-58 regarding discarding the entire packet if it is invalid, wherein cut-through switching is not performed and the port is placed on probationary status; see also col. 5, lines 41-43), the switching circuit (e.g., system card 200) coupled to the communication port (e.g., ports P1-P8 via backplane 20); a processor (e.g., address processor 220) for directing the switching circuit (e.g., system card 200) to perform unscheduled cut through routing of a communication path probe (e.g., header information) and a communication path probe update (e.g., forwarding decision) (e.g., see col. 5, lines 23-34), including discarding the communication path probe and associated information if the unscheduled cut through routing of the probe is not performed directly (e.g., see col. 5, lines 56-58 regarding discarding the entire packet if it is invalid, wherein cut-through switching is not performed and the port is placed on probationary status; see also col. 5, lines 41-43), the processor (e.g., address processor 220) coupled to the switching circuit (e.g., system card 200); and a memory (e.g., address RAM 225) for storing information associated with the control of the

switching circuit (e.g., system card 200) by the processor (e.g., address processor 220) (e.g., see col. 3, line 62 – col. 4, line 33 regarding RAM 225 storing forwarding-related decision tables obtained by address processor 220), the memory (e.g., address RAM 225) coupled (via bus 235) to the processor (e.g., address processor 220).

Further, regarding claim 55, Gridley teaches the routing is unscheduled pre-emptive cut through routing (e.g., see col. 5, lines 28-34) and the information transmitted is not time sensitive (e.g., see col. 3, lines 35-61 regarding packets having been placed in storage).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 32 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gridley in view of U.S. Patent No. 6,611,519 to Howe.

Regarding claims 32 and 37, Gridley teaches the system discussed above regarding claim 31, however, may not specifically disclose determining if incoming information has time sensitive characteristics.

Howe also teaches a network management system, and specifically, teaches a processor analyzes incoming information and determines if the incoming information has time sensitive characteristics (e.g., see col. 22, lines 52-60 wherein hardware/software means 32/33/34 inherently determine real-time information from non-real-time information). The teachings of

Howe provide improved accommodation of both time-sensitive and non-time-sensitive information (e.g., see col. 3, line 47 – col. 4, line 52). Thus, at the time of the invention it would have been obvious to apply the network management system teachings of Howe to the network management system of Gridley in order to provide improved accommodation of both time-sensitive and non-time-sensitive information (e.g., see col. 3, line 47 – col. 4, line 52).

Regarding claim 37, Howe teaches the path probe update includes information utilized to establish a communication path from a source to a destination (e.g., see col. 25, lines 1-20 and FIG. 43 wherein the requests establish source to destination communication). As discussed above, the teachings of Howe provide improved accommodation of both time-sensitive and non-time-sensitive information (e.g., see col. 3, line 47 – col. 4, line 52). Thus, at the time of the invention it would have been obvious to apply the network management system teachings of Howe to the network management system of Gridley in order to provide improved accommodation of both time-sensitive and non-time-sensitive information (e.g., see col. 3, line 47 – col. 4, line 52).

7. Claims 33-36, 38, 39 and 56-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gridley in view of Howe, further in view of U.S. Patent No. 6,173,332 to Shimonishi.

Regarding claim 33, Gridley in view of Howe teaches the system discussed above regarding claim 32, however, may not specifically disclose a processor directs the system to drop the incoming information with time sensitive characteristics if the switching circuit cannot output the information within specified timing constraints.

Shimonishi also teaches a quality of service management system and, specifically, teaches analyzing incoming information (e.g., see col. 1, line 61 – col. 2, line 15 regarding detecting VC and class of incoming packets) and determining if the incoming information has time sensitive characteristics (e.g., see col. 6, lines 27-38 regarding the class identifying a particular priority, wherein priority levels implicitly distinguish time sensitive information from non-time sensitive information). Further, Shimonishi teaches a processor directs the system to drop the incoming information (e.g., discarding the received packet, see col. 2, lines 10-11) with time sensitive characteristics if the switching circuit cannot output the information within specified timing constraints according to the time sensitive characteristics (e.g., if the calculated value for the identified priority class is smaller than the decision threshold; see also col. 2, lines 59-66 regarding discarding according to delivery time value F and decision threshold). The teachings of Shimonishi provide a network node with maximum utilization of a transmission medium with reduced number of buffer requirements while ensuring minimum bandwidth for each connection (e.g., see col. 1, lines 14-45). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the teachings of Shimonishi to the system of Gridley in view of Howe in order to provide a network node with maximum utilization of a transmission medium with reduced buffer requirements while ensuring minimum bandwidth for each connection.

Regarding claim 34, Howe teaches determining if the switching circuit is busy performing other switching operations within specified timing constraints (e.g., see FIG. 43 wherein the call request is accepted or rejected based upon busyness of the switching circuit for a specific time). As discussed above, the teachings of Howe provide improved accommodation of

both time-sensitive and non-time-sensitive information (e.g., see col. 3, line 47 – col. 4, line 52). Thus, at the time of the invention it would have been obvious to apply the network management system teachings of Howe to the network management system of Gridley in order to provide improved accommodation of both time-sensitive and non-time-sensitive information (e.g., see col. 3, line 47 – col. 4, line 52). Further, Shimonishi teaches dropping information which cannot be transmitted by a specific time (e.g., see col. 2, lines 10-11 and lines 59-66). As discussed above, the teachings of Shimonishi provide a network node with maximum utilization of a transmission medium with reduced number of buffer requirements while ensuring minimum bandwidth for each connection (e.g., see col. 1, lines 14-45). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the teachings of Shimonishi to the system of Gridley in view of Howe in order to provide a network node with maximum utilization of a transmission medium with reduced buffer requirements while ensuring minimum bandwidth for each connection.

Regarding claims 35 and 36, Howe teaches directing a switch to forward time sensitive information upon receipt and analysis of destination information in the header (e.g., see col. 33, line 66 – col. 34, line 67 regarding inserting destination information in the header and forwarding real-time information). Further, Howe teaches adding identification (e.g., implicitly included in synchronization timing messages, see col. 29, lines 30-41) to a communication path probe, forwarding the probe by cut-through routing (e.g., see col. 12, line 40) according to destination information (e.g., according to header, see col. 12, lines 66-67, wherein a header implicitly comprises destination information), and forwarding the communication path probe update (e.g., see col. 25, lines 13-16 regarding accepting of the request; see also col. 29, lines 30-41 regarding

messaging; and col. 35, line 57 – col. 36, line 3 regarding update information) according to source information (implicitly within the header). As discussed above, the teachings of Howe provide improved accommodation of both time-sensitive and non-time-sensitive information (e.g., see col. 3, line 47 – col. 4, line 52). Thus, at the time of the invention it would have been obvious to apply the network management system teachings of Howe to the network management system of Gridley in order to provide improved accommodation of both time-sensitive and non-time-sensitive information (e.g., see col. 3, line 47 – col. 4, line 52).

Regarding claim 38, Howe teaches the information and system is compatible with TCP/IP standards (e.g., see col. 15, line 9). Further, Howe teaches Howe teaches a communication path probe update (e.g., see col. 25, lines 13-16 regarding accepting of the request; see also col. 29, lines 30-41 regarding messaging; and col. 35, line 57 – col. 36, line 3 regarding update information) is broadcast to communicatively coupled neighboring intermediate network devices (e.g., see col. 25, lines 1-20 and FIG. 43 wherein the requests establish source to destinations). As discussed above, the teachings of Howe provide improved accommodation of both time-sensitive and non-time-sensitive information (e.g., see col. 3, line 47 – col. 4, line 52). Thus, at the time of the invention it would have been obvious to apply the network management system teachings of Howe to the network management system of Gridley in order to provide improved accommodation of both time-sensitive and non-time-sensitive information (e.g., see col. 3, line 47 – col. 4, line 52).

Regarding claim 39, while Howe may not specifically disclose that urgent information corresponds to a specific port associated with a timing sensitive device, Howe further teaches information may comprise data associated with urgent information applications (e.g., see col. 13,

lines 35-36) which implicitly correspond to a particular timing sensitive device at a port. As discussed above, the teachings of Howe provide improved accommodation of both time-sensitive and non-time-sensitive information (e.g., see col. 3, line 47 – col. 4, line 52). Thus, at the time of the invention it would have been obvious to apply the network management system teachings of Howe to the network management system of Gridley in order to provide improved accommodation of both time-sensitive and non-time-sensitive information (e.g., see col. 3, line 47 – col. 4, line 52). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to have the urgent information corresponding to a specific port associated with a timing sensitive device, since Howe teaches information may comprise data associated with urgent information applications (e.g., see col. 13, lines 35-36) which implicitly correspond to a particular timing sensitive device at a port.

Regarding claim 56, Gridley teaches the system discussed above regarding claim 55 and further, teaches a network management system and, specifically, teaches unscheduled pre-emptive cut through routing (e.g., see col. 5, line 17 – col. 6, line 14). However, Gridley may not specifically disclose considering timing constraints.

Howe teaches a time sensitive quality of service management method comprising: receiving information by an intermediate network device (e.g., mid-destination switches, see col. 4, lines 53-65); determining transmission timing constraints of the intermediate network device (e.g., see col. 22, lines 52-60 wherein hardware/software means 32/33/34 inherently determine real-time information from non-real-time information); sending the information via cut through routing to downstream devices by the intermediate network device (e.g., see col. 4, lines 8-26 regarding cut-through routing), wherein during the cut through routing a communication path

(e.g., see col. 25, lines 12-13 regarding request) is forwarded to downstream channels as soon as the communication path probe is received and analyzed (e.g., see FIG. 9 wherein paths for control messages are bi-directional, indicating messaging in upstream and downstream direction; see also col. 25, lines 1-20 regarding lack of use of store-and-forward packet switching). As discussed above, the teachings of Howe provide improved accommodation of both time-sensitive and non-time-sensitive information (e.g., see col. 3, line 47 – col. 4, line 52). Thus, at the time of the invention it would have been obvious to apply the network management system teachings of Howe to the network management system of Gridley in order to provide improved accommodation of both time-sensitive and non-time-sensitive information (e.g., see col. 3, line 47 – col. 4, line 52).

However, Gridley in view of Howe may not specifically disclose analyzing and dropping information based upon the timing constraints.

Shimonishi also teaches a quality of service management system and, specifically, teaches analyzing incoming information (e.g., see col. 1, line 61 – col. 2, line 15 regarding detecting VC and class of incoming packets) and determining if the incoming information has time sensitive characteristics (e.g., see col. 6, lines 27-38 regarding the class identifying a particular priority, wherein priority levels implicitly distinguish time sensitive information from non-time sensitive information). Further, Shimonishi teaches a processor directs the system to drop the incoming information (e.g., discarding the received packet, see col. 2, lines 10-11) with time sensitive characteristics if the switching circuit cannot output the information within specified timing constraints according to the time sensitive characteristics (e.g., if the calculated value for the identified priority class is smaller than the decision threshold; see also col. 2, lines

59-66 regarding discarding according to delivery time value F and decision threshold). The teachings of Shimonishi provide a network node with maximum utilization of a transmission medium with reduced number of buffer requirements while ensuring minimum bandwidth for each connection (e.g., see col. 1, lines 14-45). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the teachings of Shimonishi to the system of Gridley in view of Howe in order to provide a network node with maximum utilization of a transmission medium with reduced buffer requirements while ensuring minimum bandwidth for each connection.

Regarding claim 57, Howe teaches dropped information is resent from an originating device (e.g., see col. 8, lines 53-62). As discussed above, the teachings of Howe provide improved accommodation of both time-sensitive and non-time-sensitive information (e.g., see col. 3, line 47 – col. 4, line 52). Thus, at the time of the invention it would have been obvious to apply the network management system teachings of Howe to the network management system of Gridley in order to provide improved accommodation of both time-sensitive and non-time-sensitive information (e.g., see col. 3, line 47 – col. 4, line 52).

Regarding claim 58, Howe teaches a packet of information is switched to the downstream channels as soon as the header indicating the timing constraints of the information is received and analyzed (e.g., see FIG. 9 wherein paths for control messages are bi-directional, indicating messaging in upstream and downstream direction; see also col. 25, lines 1-20 regarding lack of use of store-and-forward packet switching). As discussed above, the teachings of Howe provide improved accommodation of both time-sensitive and non-time-sensitive information (e.g., see col. 3, line 47 – col. 4, line 52). Thus, at the time of the invention it would have been obvious to

apply the network management system teachings of Howe to the network management system of Gridley in order to provide improved accommodation of both time-sensitive and non-time-sensitive information (e.g., see col. 3, line 47 – col. 4, line 52).

Regarding claim 59, while Howe may not specifically disclose that urgent information corresponds to a specific port associated with a timing sensitive device, Howe further teaches information may comprise data associated with urgent information applications (e.g., see col. 13, lines 35-36) which implicitly correspond to a particular timing sensitive device at a port. As discussed above, the teachings of Howe provide improved accommodation of both time-sensitive and non-time-sensitive information (e.g., see col. 3, line 47 – col. 4, line 52). Thus, at the time of the invention it would have been obvious to apply the network management system teachings of Howe to the network management system of Gridley in order to provide improved accommodation of both time-sensitive and non-time-sensitive information (e.g., see col. 3, line 47 – col. 4, line 52). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to have the urgent information corresponding to a specific port associated with a timing sensitive device, since Howe teaches information may comprise data associated with urgent information applications (e.g., see col. 13, lines 35-36) which implicitly correspond to a particular timing sensitive device at a port.

8. Claims 50-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howe in view of Gridley, further in view of Shimonishi.

Regarding claim 50, Howe teaches a time sensitive quality of service management method comprising: receiving information by an intermediate network device (e.g., mid-

destination switches, see col. 4, lines 53-65); determining transmission timing constraints of the intermediate network device (e.g., see col. 22, lines 52-60 wherein hardware/software means 32/33/34 inherently determine real-time information from non-real-time information); sending the information via cut through routing to downstream devices by the intermediate network device (e.g., see col. 4, lines 8-26 regarding cut-through routing), wherein during the cut through routing a communication path (e.g., see col. 25, lines 12-13 regarding request) is forwarded to downstream channels as soon as the communication path probe is received and analyzed (e.g., see FIG. 9 wherein paths for control messages are bi-directional, indicating messaging in upstream and downstream direction; see also col. 25, lines 1-20 regarding lack of use of store-and-forward packet switching).

However, Howe may not specifically disclose the cut through routing is unscheduled pre-emptive cut through routing, and may not specifically disclose analyzing and dropping information based upon the timing constraints.

As discussed above, Gridley teaches a network management system and, specifically, teaches unscheduled pre-emptive cut through routing (e.g., see col. 5, line 17 – col. 6, line 14). The teachings of Gridley provide advantages of improved packet validity and latency (e.g., see col. 5, line 64 – col. 6, line 14). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the cut through routing teachings of Gridley to the cut through routing method of Howe in order to provide improved packet validity and latency (e.g., see col. 5, line 64 – col. 6, line 14).

However, Howe in view of Gridley may not specifically disclose determining timing constraints of the intermediate network device and analyzing and dropping information based upon the timing constraints.

Shimonishi also teaches a quality of service management system and, specifically, teaches analyzing incoming information (e.g., see col. 1, line 61 – col. 2, line 15 regarding detecting VC and class of incoming packets) and determining if the incoming information has time sensitive characteristics (e.g., see col. 6, lines 27-38 regarding the class identifying a particular priority, wherein priority levels implicitly distinguish time sensitive information from non-time sensitive information). Further, Shimonishi teaches a processor directs the system to drop the incoming information (e.g., discarding the received packet, see col. 2, lines 10-11) with time sensitive characteristics if the switching circuit cannot output the information within specified timing constraints according to the time sensitive characteristics (e.g., if the calculated

value for the identified priority class is smaller than the decision threshold; see also col. 2, lines 59-66 regarding discarding according to delivery time value F and decision threshold). The teachings of Shimonishi provide a network node with maximum utilization of a transmission medium with reduced number of buffer requirements while ensuring minimum bandwidth for each connection (e.g., see col. 1, lines 14-45). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the teachings of Shimonishi to the system of Howe in view of Gridley in order to provide a network node with maximum utilization of a transmission medium with reduced buffer requirements while ensuring minimum bandwidth for each connection.

Regarding claim 51, Howe teaches the path probe update includes information utilized to establish a communication path from a source to a destination (e.g., see col. 25, lines 1-20 and FIG. 43 wherein the requests establish source to destination communication).

Regarding claim 52, Howe teaches cut through routing of a communication path probe (e.g., see col. 25, lines 12-13 regarding request) and a communication path probe update (e.g., see col. 25, lines 13-16 regarding accepting of the request; see also col. 29, lines 30-41 regarding messaging; and col. 35, line 57 – col. 36, line 3 regarding update information), and upstream forwarding of the communication path probe update (e.g., see FIG. 9 wherein paths for control messages are bi-directional, indicating messaging in upstream and downstream direction).

Regarding claim 53, Howe teaches receiving information intended for a final destination by an intermediate network device (e.g., mid-destination switches, see col. 4, lines 53-65); determining if an intermediate network device (e.g., mid-destination switches) has communicated information along a first path that is included in a second communication path

(e.g., one of upstream/downstream paths) for time sensitive information intended for a final destination (e.g., see col. 22, lines 52-60 wherein hardware/software means 32/33/34 inherently determine real-time information from non-real-time information); communicating the information along the first communication path (e.g., see FIG. 9 wherein paths for control messages are bi-directional, indicating messaging in upstream and downstream direction; see also col. 25, lines 1-20 regarding lack of use of store-and-forward packet switching).

Regarding claim 54, Howe teaches determining if the switching circuit is busy performing other switching operations within specified timing constraints (e.g., see FIG. 43 wherein the call request is accepted or rejected based upon busyness of the switching circuit for a specific time). Further, Shimonishi teaches dropping information which cannot be transmitted by a specific time (e.g., see col. 2, lines 10-11 and lines 59-66). As discussed above, the teachings of Shimonishi provide a network node with maximum utilization of a transmission medium with reduced number of buffer requirements while ensuring minimum bandwidth for each connection (e.g., see col. 1, lines 14-45). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the teachings of Shimonishi to the system of Howe in view of Gridley in order to provide a network node with maximum utilization of a transmission medium with reduced buffer requirements while ensuring minimum bandwidth for each connection.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin M Philpott whose telephone number is 571.272.3162. The examiner can normally be reached on M-F, 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on 571.272.3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Justin M Philpott

ALPUS H. HSU
PRIMARY EXAMINER